

### ABSTRACT OF THE DISCLOSURE

A tone ordered discrete multitone interleaver system and method, including a tone ordered interleaver and deinterleaver, are provided for efficiently communicating data despite noise affecting a Discrete Multitone modulation (DMT) system. The tone ordered  
5 discrete multitone interleaver forces interleaving of trellis encoded information by assigning a different number of bits to adjacent tones or adjacent tone pairs.